

**REMARKS**

Claims 1-33 are presently pending in this application. Claims 27 and 29 have been amended. No new matter has been added. Therefore, claims 1-33 remain pending in the present application.

**Allowed and Objected To Claims**

The Applicants thank the Examiner for the allowance of claims 1-23.

Claims 32-33 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base and any intervening claims.

**Claim Rejections – 35 U.S.C. § 103 – Kurandt**

Claims 24-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,838,697 to Kurandt (“Kurandt”).

**Independent Claim 24**

Independent claim 24 is directed toward a readhead that includes “a face defining **an exit aperture** through which the beam passes, wherein **the sample aperture** is spaced from the face and positioned to be illuminated by the beam such that when the sample is located on the sample aperture, the sample will reflect at least a portion of the beam”. Claim 24 further includes “a detector comprising an active area and **a detection aperture** positioned to receive at least a portion of diffuse light resulting from the reflected beam”. Thus, claim 24 recites three distinct apertures: 1) an exit aperture; 2) a sample aperture; and 3) a detection aperture. Non-limiting examples of such apertures are marked 19, 22, and 28, respectively, in Figures 1 and 2 of the present specification.

The Applicants submit that the recited apertures of claim 24 are not disclosed, taught, or suggested by Kurandt. In finding obvious the element requiring an exit aperture and a sample aperture, the Office Action at page 2 relied on a portion of Kurandt that states, “the radiations of the individual diodes are combined to form a single radiation, which is deflected through a lens arrangement 11 onto or through the sample 12 to be measured.” Kurandt, col. 3, ll. 7-10. In finding obvious the element requiring a detection aperture, the Office Action at page 3 relied on a portion of

Kurandt generally describing an apparatus comprising a transmitter having three light-emitting diodes, a control unit, a receiver, and an evaluation unit. *Id.*, col. 2, ll. 53-63. Thus, nowhere in these relied-upon portions or any other portion of Kurandt is an aperture disclosed, let alone **three different apertures** – an exit aperture, a sample aperture, and a detection aperture – as required by claim 24. Accordingly, the positions of such apertures relative to one another and to the other components of the readhead specified in claim 24 are also not disclosed, taught, or suggested in Kurandt.

Furthermore, the Office Action states that it “is known in the art that scattering is a change of the spatial distribution of a beam of radiation when it interacts with a surface.” Office Action, p. 3. Immediately after this statement, the Office Action makes a substantial leap in logic, stating, “Therefore it would have been obvious . . . to provide/design light-scattering section that comprises a plurality of steps defining one or more angles greater than 90 degrees for the purpose providing sufficient illumination to create a sufficiently bright image with accuracy.” *Id.* In the immediately proceeding sentence, the Office Action states that “it would have been obvious to provide/design the section that is positioned such that the steps are angled to reduce stray internal light on the detector active area for the purpose of providing a more accurate measurement.” *Id.*

The Applicants respectfully submit that a “light-scattering section compris[ing] a plurality of steps defining one or more angles greater than 90 degrees . . . positioned such that the steps are angled to reduce stray internal light on the detector active area”, as required in claim 24, is not obvious from the proposed definition of scattering, as the Office Action suggests. The Applicants respectfully submit that such a leap in logic was made only after reading the Applicants’ disclosure and, thus, was based on improper hindsight.

For at least these reasons, Kurandt does not disclose, teach, or suggest all of the elements of claim 24. As such, the Applicants respectfully submit that independent claim 24 and its dependent claims 25-33 are patentable over Kurandt.

### **Dependent Claim 25**

Claim 25, which depends from claim 24, further includes that “the one or more angles defined by the plurality of steps are approximately 100 degrees.”

In support of its assertion that claim 25 is obvious over Kurandt, the Office Action merely makes a general statement that “[i]t would have been obvious to one having ordinary skill in the art

at the time of invention to provide/design one or more angles defined by the plurality of steps that are approximately 100 degrees for the purpose of providing sufficient illumination to create a sufficiently bright image with accuracy.” Office Action, p. 3. This is clearly hindsight. The Office Action does not specify **where** in either Kurandt or in the knowledge generally available to one skilled in the art such a limitation is disclosed, taught, or suggested.

Thus, the Applicants respectfully submit that claim 25 is allowable for at least this reason as well as for the reasons set forth above with respect to claim 24, from which claim 25 depends.

**Claim Rejections – 35 U.S.C. § 103 – Kurandt In View Of Henderson**

Claims 26 and 28-31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kurandt in view of U.S. Patent No. 3,910,701 to Henderson et al. (“Henderson”).

**Claims 26 and 28**

Claim 26, which depends from claim 24, requires that “the second center-wavelength is greater than the first center-wavelength.” Claim 28, which depends from claim 26, requires that “the first LED has associated therewith a first bandwidth and a first tolerance”, “the second LED has associated therewith a second bandwidth and a second tolerance”, and “the beam splitter comprises a filter; and the filter has associated therewith a filter bandpass being relatively narrow compared to the first bandwidth and the second bandwidth.”

In finding these claims obvious, the Office Action states, “Henderson discloses a variety of wavelengths (i.e. 100nm) and any selected narrow band (i.e. 25 nm) (col. 2, line 11-16) (col. 6, line 18-22)”. Office Action, p. 4. The very next sentence in the Office Action states:

Therefore it would have been obvious to one having ordinary skill in the art at the time of invention to provide the second center-wavelength that is greater than the first center-wavelength and provide the filter that is [sic] associated therewith a filter bandpass that is relatively narrow compared to the first bandwidth and the second bandwidth because it provide[s] easier way of selecting the wavelength of interest.

Office Action, p. 4. It is unclear to the Applicants, however, how this statement follows from the cited portions of Henderson. Neither the cited portions nor any other portions of Henderson even mention the problem identified by the Office Action – “provid[ing] an easier way of selecting the wavelength of interest”, let alone the solution to the problem – providing the second center-wavelength that is greater than the first center-wavelength (see claim 26) and providing a filter having a filter bandpass that is relatively narrow compared to the first bandwidth and the second

bandwidth (see claim 28). Furthermore, nothing in the cited portions of Henderson disclose the second center-wavelength being greater than the first center-wavelength or a filter bandpass being relatively narrow compared to the first bandwidth and the second bandwidth. Thus, if the rejection of claims 26 and 28 is to be maintained, the Applicants respectfully request that the next Office Action specify where, either in Kurandt, Henderson, or in the knowledge generally available to one skilled in the art, such a limitation is disclosed, taught, or suggested.

Furthermore, regarding claim 28, the Office Action states, “the prior art of record, taken alone or in combination, fails to disclose or render obvious the bandpass filter compris[ing] a relatively narrow bandpass as compared to a bandwidth associated with the first LED.” Office Action, p. 5. This element, which the Office Action agrees is novel, is essentially encompassed by claim 28. Furthermore, nowhere in Kurandt, Henderson, or a combination thereof is a **bandpass filter** disclosed, as required by claim 28.

For at least these reasons, as well as for those reasons provided above with respect to claims 24 from which claims 26 and 28 depend, the Applicants respectfully submit that claims 26, 28, and their dependent claims 27 and 29-33 are allowable over the cited references.

### **Dependent Claims 29-31**

In addition to the elements of claims 24, 26, and 28, from which claim 29 depends, claim 29 requires that “the filter has associated therewith a filter center-wavelength less than approximately the second center-wavelength plus second tolerance.” Claim 30, which depends from claim 29, requires that “the filter center-wavelength is less than approximately the first center-wavelength plus the first tolerance.” Claim 31, which depends from claim 30, further includes “the filter center-wavelength is less than approximately the first center-wavelength minus the first tolerance.”

The Office Action states, “[T]he prior art of record, taken alone or in combination, fails to disclose . . . [that] the filter center-wavelength is approximately within a range from about the illumination center-wavelength minus the illumination tolerance to about the illumination center-wavelength plus the illumination tolerance.” Office Action, p. 4. This element, which the Office Action agrees is novel, is essentially encompassed by claims 29-31.

Thus, for at least these reasons, as well as for those provided above with respect to claims 24 26, and 28, from which claims 29-31 depend, the Applicants respectfully submit that claims 29-31 are allowable over the cited references.

**Conclusion**

Applicants submit that the claims are in a condition for allowance and action toward that end is earnestly solicited. Applicants do not believe that any additional fees are due; however, should any additional fees be required (except for payment of the issue fee), the Commissioner is authorized to deduct the fees from Bayer HealthCare LLC Deposit Account No. 13-3375 (MSE-2673).

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Respectfully submitted,

By   
John C. Gatz

Registration No.: 41,774  
JENKENS & GILCHRIST, A PROFESSIONAL  
CORPORATION  
225 W. Washington, Ste. 2600  
Chicago, Illinois 60606-3418  
(312) 425-3900  
Attorneys For Applicants